

Effectiveness of non-commercial cleaning agents verses commercial agents

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This study determined the efficiency of using non-commercial cleaning agents for the radioactive decontamination of wet ^{99m}Tc -pertechnetate ($^{99m}\text{TcO}_4$) spills. Methods: Two trials were run using six cleaning agents (Radiacwash[™] (Biodex), bleach, Windex[®] (S.C. Johnson & Son, Inc.), Fantastic[®] (S.C. Johnson & Son, Inc.), water, and soap and water for $^{99m}\text{TcO}_4$ decontamination effectiveness on vinyl floor tile. Results: All the decontamination agents cleaned up well, and were all below background. The Geiger-Muller Detector (GM) data showed that there was no fixed contamination on any of the tiles for both trials. The background for trial 1 was 0.083, and trial 2 background was 0.079. Trial 1 exposure rate after decontamination of water was 0.030. Trial 2 exposure rate after decontamination of water was 0.032, and Windex[®] (S.C. Johnson & Son, Inc.) was 0.031. Conclusion: Trial 1 showed that water was the best cleaning agent and trial 2 showed that water and Windex[®] (S.C. Johnson & Son, Inc.) are the best cleaning agents. Key Words: pertechnetate, decontamination, contamination, wet spills

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